

Abstract

An optical add-drop multiplexer comprises an optical switch (10) for selection of a desired wavelength channel to be extracted, a pre-processing channel assembly (20), an optical reflector (50), an optical extractor (60), a post-processing channel assembly (30), and an optical coupler (40) aligned with the post-processing channel assembly. The pre-processing channel assembly transmits a multiplexed signal stream containing a plurality of channels. The optical reflector directs light rays emitted from the pre-processing channel assembly into the optical extractor. The optical extractor comprises a narrow bandpass filter (62) that allows a desired channel to pass therethrough and reflects other unextracted channels. The desired channel can be dropped by switching to a corresponding output port of the optical switch. The optical reflector directs light rays reflected from the optical extractor to the post-processing channel assembly. The optical coupler combines the unextracted channels and an insertion channel.